INDEX TO AUTHORS

A

Albanese, Anthony A. Studies on human blood proteins. I. The isoleucine deficiency of hemoglobin, 613

— and **Frankston, Jane E.** The estimation of tryptophane in human urine, 59

Alderton, Gordon, Ward, W. H., and **Fevold, H. L.** Isolation of lysozyme from egg white, 43

Allinson, M. J. Carl. A specific enzymatic method for the determination of creatine and creatinine in blood, 169

Anderson, R. J. See *Ginger and Anderson*, 203, 213

Archibald, Reginald M. Colorimetric determination of urea, 507

—. The synthesis of urea from glutamine by liver extract, 519

Artom, Camillo. A quantitative method for ethanolamine and serine as a basis for the determination of phosphatidyl ethanolamine and phosphatidyl serine in tissues, 585

—. Some data on the distribution of individual phospholipids in rat tissues and in human plasma, 595

Asarkh, R. M. See *Braunstein and Asarkh*, 421

B

Bailey, C. Cabell. See *Leech and Bailey*, 525

Barnes, Thelma M. See *Albanese*, 613

Barron, E. S. Guzman, and **Singer, Thomas P.** Studies on biological oxidations. XIX. Sulfhydryl enzymes in carbohydrate metabolism, 221

—. See *Singer and Barron*, 241

Baumann, C. A. See *Miller and Baumann*, 551

Beveridge, J. M. R., and **Lucas, Colin C.** The effect of dietary fat on the lipotropic action of inositol, 311

Binkley, S. B. See *Bird, Binkley, Bloom, Emmett, and Pfiffner*, 413

Bird, O. D., Binkley, S. B., Bloom, E. S., Emmett, A. D., and **Pfiffner, J. J.** On the enzymic formation of vitamin B_6 from its conjugate, 413

Bloch, Konrad. The biological conversion of cholesterol to pregnanediol, 661

—. See *Rittenberg and Bloch*, 749

Block, Walter D. See *Buchanan, Block, and Christman*, 181

—. See *Buchanan, Christman, and Block*, 189

Bloom, E. S. See *Bird, Binkley, Bloom, Emmett, and Pfiffner*, 413

Blotter, Lois. See *Lyman, Kuiken, Blotter, and Hale*, 395

Braunstein, A. E., and **Asarkh, R. M.** The mode of deamination of *l*-amino acids in surviving tissues, 421

Bronner, J. See *Archibald*, 507

Buchanan, John M., Sakami, Warwick, Gurin, Samuel, and **Wilson, D. Wright.** A study of the intermediates of acetoacetate oxidation with isotopic carbon, 747

Buchanan, Oliver H., Block, Walter D., and **Christman, A. A.** The metabolism of the methylated purines. I. The enzymatic determination of urinary uric acid, 181

—, **Christman, A. A.,** and **Block, Walter D.** The metabolism of the methylated purines. II. Uric acid excretion following the ingestion of caffeine, theophylline, and theobromine, 189

Burrill, Marie W., Freeman, Smith, and **Ivy, A. C.** Sodium, potassium, and chloride excretion of human subjects exposed to a simulated altitude of eighteen thousand feet, 297

—. See *Freeman and Burrill*, 287

C

Chalkley, Harold W. See *Greenstein and Chalkley*, 753

Christman, A. A. See *Buchanan, Block, and Christman,* 181
—. See *Buchanan, Christman, and Block,* 189
Cohen, Philip P. See *Lichstein and Cohen,* 85
Colowick, Sidney P., and **Price, Winston H.** The rôle of dihydrocozymase in enzymatic transphosphorylation, 415

D

Day, Paul L., Mims, Virginia, Totter, John R., Stokstad, E. L. R., Hutchings, B. L., and **Sloane, N. H.** The successful treatment of vitamin M deficiency in the monkey with highly purified *Lactobacillus casei* factor, 423
—. See *Laskowski, Mims, and Day,* 731
Dean, R. B., and **Loring, Hubert S.** The diffusion of organic ions and the Einstein-Sutherland relationship, 717
Deuel, Harry J., Jr., Johnston, Cornelia, Morehouse, Margaret Gulick, Rollman, Hilda S., and **Winzler, Richard J.** Studies on ketosis. XXIV. On the question of butyric acid acting as a precursor of carbohydrate, 135
Dill, D. B. See *Johnson, Edwards, Dill, and Wilson,* 461
Doudoroff, Michael. On the utilization of raffinose by *Pseudomonas saccharophila,* 699
Downs, Clarence E. See *Hunter and Downs,* 427
Drabkin, David L. Spectrophotometric studies. XIII. The absorption spectrum of isolated dihydrocozymase, 563
— and **Meyerhof, Otto.** A spectrophotometric study of the oxidation and phosphorylation of *d*-glyceraldehyde 3-phosphate, 571
— and **Schmidt, Carl F.** Spectrophotometric studies. XII. Observation of circulating blood *in vivo,* and the direct determination of the saturation of hemoglobin in arterial blood, 69
Dunn, Max S., Schott, Hermann F., Frankl, Willi, and **Rockland, Louis B.** Investigations of amino acids, peptides, and proteins. XX. The determination of apparent free tryptophane in blood by a microbiological method, 387

E

Easterling, Leslie. See *Sure,* 543
Edwards, H. T. See *Johnson, Edwards, Dill, and Wilson,* 461
Elvehjem, C. A. See *Teply and Elvehjem,* 303
Emerson, Gladys A. The biological activity of biotin and related compounds, 127
Emmett, A. D. See *Bird, Binkley, Bloom, Emmett, and Pfiffner,* 413

F

Fairbairn, Donald. Free fatty acids in animal tissues, 645
—. The phospholipase of the venom of the cottonmouth moccasin (*Agkistrodon piscivorus* L), 633
Fevold, H. L. See *Alderton, Ward, and Fevold,* 43
Floyd, Norman F. See *Medes, Weinhouse, and Floyd,* 35, 751
Frankl, Willi. See *Dunn, Schott, Frankl, and Rockland,* 387
Frankston, Jane E. See *Albanese and Frankston,* 59
Freeman, Smith, and **Burrill, Marie W.** A simple gravimetric method for the determination of urinary potassium, 287
—. See *Burrill, Freeman, and Ivy,* 297
Friedemann, Theodore E., Haugen, Gladys E., and **Kmieciak, Thaddeus C.** Pyruvic acid. III. The level of pyruvic and lactic acids, and the lactic-pyruvic ratio, in the blood of human subjects. The effect of food, light muscular activity, and anoxia at high altitude, 673

G

Galvão, P. E., Pereira, J., and **Limongi, J. Papaterra.** Lactic acid oxidation quotient in minced brain of normal and avitaminotic chicken, 667

Ginger, Leonard G., and **Anderson, R. J.** The chemistry of the lipids of tubercle bacilli. LXXII. Fatty acids occurring in the wax prepared from tuberculin residues. Concerning mycocerosic acid, 203

— and —. LXXIII. Studies on phthiocerol, 213

Göksu, Vedia. See *Haurowitz, Tunca, Schwerin, and Göksu*, 621

Greenberg, David M. Studies in mineral metabolism with the aid of artificial radioactive isotopes. VIII. Tracer experiments with radioactive calcium and strontium on the mechanism of vitamin D action in rachitic rats, 99

Greenstein, Jesse P., and **Chalkley, Harold W.** Effect of nucleates on the rate of methylene blue decolorization in tissue extracts, 753

Grinstein, Moisés, Schwartz, Samuel, and **Watson, Cecil James.** Studies of the uroporphyrins. I. The purification of uroporphyrin I and the nature of Waldenström's uroporphyrin, as isolated from porphyria material, 323

Gunness, Marion. See *Stokes and Gunness*, 121, 651

Gurin, Samuel. See *Buchanan, Sakami, Gurin, and Wilson*, 747

H

Hale, Fred. See *Lyman, Kuiken, Blotter, and Hale*, 395

Haugen, Gladys E. See *Friedemann, Haugen, and Kmieciak*, 673

Haurowitz, Felix, Tunca, Mürvet, Schwerin, Paula, and **Göksu, Vedia.** The action of trypsin on native and denatured proteins, 621

Hawkinson, Violet. See *Watson, Schwartz, and Hawkinson*, 345

Hegsted, D. Mark. The specificity of the leucine, isoleucine, and valine requirements of *Lactobacillus arabinosus* 17-5, 741

Hirschmann, Frieda B. See *Hirschmann and Hirschmann*, 601

Hirschmann, H., and **Hirschmann, Frieda B.** Steroid excretion in a case of adrenocortical carcinoma. II. An examination of the non-ketonic fraction precipitable with digitonin, 601

Hodson, A. Z. The use of *Neurospora* for the determination of choline and biotin in milk products, 383

Horn, Millard J., and **Jones, D. Breese.** A rapid colorimetric method for the determination of tryptophane in proteins and foods, 153

Hunter, Andrew, and **Downs, Clarence E.** The inhibition of arginase by amino acids, 427

Hutchings, B. L. See *Day, Mims, Totter, Stokstad, Hutchings, and Sloane*, 423

I

Ivy, A. C. See *Burrill, Freeman, and Ivy*, 297

J

Johnson, R. E., Edwards, H. T., Dill, D. B., and **Wilson, J. W.** Blood as a physicochemical system. XIII. The distribution of lactate, 461

Johnston, Cornelia. See *Deuel, Johnston, Morehouse, Rollman, and Winzler*, 135

Jones, D. Breese. See *Horn and Jones*, 153

Jukes, Thomas H., and **Oleson, J. J.** Choline-like nutritional effect of dimethylaminoethanol, 419

K

Kmieciak, Thaddeus C. See *Friedemann, Haugen, and Kmieciak*, 673

Kuiken, K. A. See *Lyman, Kuiken, Blotter, and Hale*, 395

Kyker, Granvil C., and **Lewis, Dorothy Plonk.** The microdetermination of certain alkaloids and other bases by photometric turbidimetry, 707

L

Laskowski, Michael, Mims, Virginia, and **Day, Paul L.** Studies on the enzyme which produces the *Streptococcus lactis* R-stimulating factor from inactive precursor substance in yeast, 731

Leech, Rachel S., and **Bailey, C. Cabell.** Blood alloxan and blood glutathione in rabbits injected with alloxan, 525
Lehninger, Albert L. The relationship of the adenosine polyphosphates to fatty acid oxidation in homogenized liver preparations, 363
Levin, Louis. The fecal excretion of estrogens by pregnant cows, 407
—. See *Moore, Levin, and Smelser*, 723
Lewis, Dorothy Plonk. See *Kyker and Lewis*, 707
Lewis, J. C., and **Olcott, Harold S.** A *Lactobacillus* assay method for *l*(+)-glutamic acid, 265
Lichstein, Herman C., and **Cohen, Philip P.** Transamination in bacteria, 85
Lieben, Fritz. On the silver compound of casein in alkaline medium, 627
Limongi, J. Papaterra. See *Galvão, Pereira, and Limongi*, 667
Loring, Hubert S. See *Dean and Loring*, 717
Lucas, Colin C. See *Beveridge and Lucas*, 311
Lyman, Carl M., Kuiken, K. A., Blotter, Lois, and **Hale, Fred.** The microbiological determination of amino acids. II. Glutamic acid, 395

M

Man, Evelyn B. See *Woodruff and Man*, 93
Mayer, A. Margot. See *Sobel and Mayer*, 255
McRary, Willard L., and **Slattery, Marion C.** The colorimetric determination of fructosan in plant material, 161
Medes, Grace, Weinhouse, Sidney, and **Floyd, Norman F.** Fatty acid metabolism. II. The breakdown of carboxyl-labeled butyric acid by liver tissue, 35
—, —, and —. Ketone body formation from acetate in kidney, with isotopic carbon as a tracer, 751
Mehl, John W. The biuret reaction of proteins in the presence of ethylene glycol, 173
Meyerhof, Otto. The origin of the reaction of Harden and Young in cell-free alcoholic fermentation, 105
—. See *Drabkin and Meyerhof*, 571
Miller, E. C., and **Baumann, C. A.** Relative effects of casein and tryptophane on the health and xanthurenic acid excretion of pyridoxine-deficient mice, 551
Milone, Henry S. See *Veitch and Milone*, 417
Mims, Virginia. See *Day, Mims, Totter, Stokstad, Hutchings, and Sloane*, 423
—. See *Laskowski, Mims, and Day*, 731
Moore, Dan H., Levin, Louis, and **Smelser, George K.** Electrophoretic and salt fractionation of the serum proteins of normal and hypothyroid rats, 723
Morehouse, Margaret Gulick. See *Deuel, Johnston, Morehouse, Rollman, and Winzler*, 135

O

Olcott, Harold S. See *Lewis and Olcott*, 265
Oleson, J. J. See *Jukes and Oleson*, 419
Ortiz, P. See *Archibald*, 507
Ott, Walther H. Studies on the activity of synthetic biotin, its enantiomorph, and related racemic forms for the chick, 131

P

Pangborn, Mary C. A note on the preparation of cardiolipin, 691
Pereira, J. See *Galvão, Pereira, and Limongi*, 667
Pfiffner, J. J. See *Bird, Binkley, Bloom, Emmett, and Pfiffner*, 413
Prado, J. Leal. See *Villela and Prado*, 693
Price, Winston H. See *Colowick and Price*, 415

R

Rannefeld, Adelle Neely. See *Snell and Rannefeld*, 475

Rittenberg, D., and **Bloch, Konrad.** Some biological reactions of acetic acid, 749
Rockland, Louis B. See *Dunn, Schott, Frankl, and Rockland*, 387
Rollman, Hilda S. See *Deuel, Johnston, Morehouse, Rollman, and Winzler*, 135

S

Sakami, Warwick. See *Buchanan, Sakami, Gurin, and Wilson*, 747
Schlenk, F., and **Snell, Esmond E.** Vitamin B_6 and transamination, 425
Schmidt, Carl F. See *Drabkin and Schmidt*, 69
Schott, Hermann F. See *Dunn, Schott, Frankl, and Rockland*, 387
Schwartz, Samuel. See *Grinstein, Schwartz, and Watson*, 323
—. See *Watson, Schwartz, and Hawkinson*, 345
Schwerin, Paula. See *Haurowitz, Tunca, Schwerin, and Göksu*, 621
Sebrell, W. H. See *Wooley and Sebrell*, 141
Singer, Thomas P., and **Barron, E. S. Guzman.** Studies on biological oxidations. XX. Sulfhydryl enzymes in fat and protein metabolism, 241
—. See *Barron and Singer*, 221
Slattery, Marion C. See *McRary and Slattery*, 161
Sloane, N. H. See *Day, Mims, Totter, Stokstad, Hutchings, and Sloane*, 423
Smelser, George K. See *Moore, Levin, and Smelser*, 723
Snell, Esmond E., and **Rannefeld, Adelle Neely.** The vitamin B_6 group. III. The vitamin activity of pyridoxal and pyridoxamine for various organisms, 475
—. The vitamin B_6 group. IV. Evidence for the occurrence of pyridoxamine and pyridoxal in natural products, 491
—. See *Schlenk and Snell*, 425
Sobel, Albert E., and **Mayer, A. Margot.** Improvements in the Schoenheimer-Sperry method for the determination of free cholesterol, 255
Sprince, Herbert. See *Woolley and Sprince*, 447
Stokes, Jacob L., and **Gunness, Marion.** Microbiological activity of synthetic biotin, its optical isomers, and related compounds, 121
— and —. Microbiological methods for the determination of amino acids. I. Aspartic acid and serine, 651
Stokstad, E. L. R. See *Day, Mims, Totter, Stokstad, Hutchings, and Sloane*, 423
Stoppani, Andrés O. M. Precursors of indoxyl, 1
Stroh, E. See *Archibald*, 507
Sure, Barnett. Vitamin interrelationships. IV. Further studies on the influence of chronic thiamine deficiency on riboflavin metabolism, 543

T

Teply, L. J., and **Elvehjem, C. A.** The titrimetric determination of "*Lactobacillus casei* factor" and "folic acid," 303
Theis, Edwin R. The collagen-quinone reaction. I. Fixation and thermolability as a function of pH values, 23
—. The protein-formaldehyde reaction. III. The effect of temperature and denaturation, 7
—. IV. Denaturation by deaminization of collagen, 15
Totter, John R. See *Day, Mims, Totter, Stokstad, Hutchings, and Sloane*, 423
Tunca, Mürvet. See *Haurowitz, Tunca, Schwerin, and Göksu*, 621

V

Veitch, Fletcher P., Jr., and **Milone, Henry S.** Chromatographic separation of the 2,4-dinitrophenylhydrazones of estrone and equilenin, 417
Villela, Gilberto G., and **Prado, J. Leal.** Riboflavin in blood plasma of some Brazilian snakes, 693

W

Ward, W. H. See *Alderton, Ward, and Fevold*, 43

Watson, Cecil James, Schwartz, Samuel, and **Hawkinson, Violet.** Studies of the uroporphyrins. II. Further studies of the porphyrins of the urine, feces, bile, and liver in cases of porphyria, with particular reference to a Waldenström type porphyrin behaving as an entity on the Tswett column, 345

—. See *Grinstein, Schwartz, and Watson,* 323

Weinhouse, Sidney. See *Medes, Weinhouse, and Floyd,* 35, 751

Wilson, D. Wright. See *Buchanan, Sakami, Gurin, and Wilson,* 747

Wilson, J. W. See *Johnson, Edwards, Dill, and Wilson,* 461

Winzler, Richard J. See *Deuel, Johnston, Morehouse, Rollman, and Winzler,* 135

Woodruff, Calvin W., and **Man, Evelyn B.** Concentration of α-amino acid nitrogen in plasma of normal subjects, 93

Wooley, Jerald G., and **Sebrell, W. H.** Two microbiological methods for the determination of $l(-)$-tryptophane in proteins and other complex substances, 141

Woolley, D. W. Production of nicotinic acid deficiency with 3-acetylpyridine, the ketone analogue of nicotinic acid, 455

— and **Sprince, Herbert.** The nature of some new dietary factors required by guinea pigs, 447

INDEX TO SUBJECTS

A

Acetate(s): Kidney, ketone body formation, relation, isotopic carbon in study, *Medes, Weinhouse, and Floyd*, 751

Acetic acid: Reactions, biological, *Rittenberg and Bloch*, 749

Acetoacetate: Oxidation, isotopic carbon in study, *Buchanan, Sakami, Gurin, and Wilson*, 747

Acetylpyridine: 3-, nicotinic acid deficiency relation, *Woolley*, 455

Adenosine polyphosphate(s): Fatty acid oxidation, liver, homogenized, relation, *Lehninger*, 363

Adrenocortical carcinoma: Digitonin-precipitable non-ketonic fraction, *Hirschmann and Hirschmann*, 601
Steroid excretion, *Hirschmann and Hirschmann*, 601

Agkistrodon piscivorus: *See* Moccasin

Alcohol(s): Fermentation, cell-free, Harden-Young reaction, origin, *Meyerhof*, 105

Alkaloid(s): Determination, micro-, turbidimetric, *Kyker and Lewis*, 707

Alloxan: Blood, alloxan injection effect, *Leech and Bailey*, 525

Altitude: Blood pyruvic-lactic acid ratio, effect, *Friedemann, Haugen, and Kmieciak*, 673
Chloride excretion, effect, *Burrill, Freeman, and Ivy*, 297
Potassium excretion, effect, *Burrill, Freeman, and Ivy*, 297
Sodium excretion, effect, *Burrill, Freeman, and Ivy*, 297

Amino acid(s): α-, nitrogen, blood plasma, *Woodruff and Man*, 93
Arginase inhibition, effect, *Hunter and Downs*, 427
Determination, microbiological, *Lyman, Kuiken, Blotter, and Hale*, 395

Amino acid(s)—*continued:*
Stokes and Gunness, 651
l-, tissues, surviving, deamination, *Braunstein and Asarkh*, 421
Peptides and, *Dunn, Schott, Frankl, and Rockland*, 387
Proteins and, *Dunn, Schott, Frankl, and Rockland*, 387

Anoxia: Blood pyruvic-lactic acid ratio, effect, *Friedemann, Haugen, and Kmieciak*, 673

Arginase: Amino acid effect, *Hunter and Downs*, 427

Aspartic acid: Determination, microbiological, *Stokes and Gunness*, 651

Avitaminosis: Brain lactic acid oxidation, *Galvão, Pereira, and Limongi*, 667

B

Bacillus: *See also Lactobacillus, Streptococcus*, Tubercle bacillus

Bacteria: Transamination, *Lichstein and Cohen*, 85
See also Pseudomonas

Bile: Porphyrin, *Watson, Schwartz, and Hawkinson*, 345

Biotin: Activity, *Emerson*, 127
Milk products, determination, *Neurospora* use, *Hodson*, 383
-Related compounds, activity, *Emerson*, 127
Synthetic, activity and optical isomers, *Stokes and Gunness*, 121
—, —, chick, *Ott*, 131
—, and related compounds, activity and optical isomers, *Stokes and Gunness*, 121
—, enantiomorph, activity, chick, *Ott*, 131
—, related racemic forms, activity, chick, *Ott*, 131

Biuret reaction: Proteins, ethylene glycol effect, *Mehl*, 173

Blood: Alloxan, alloxan injection effect, *Leech and Bailey,* 525
Arterial, hemoglobin saturation, *in vivo,* spectrophotometry, *Drabkin and Schmidt,* 69
Creatine, determination, enzymatic, *Allinson,* 169
Creatinine, determination, enzymatic, *Allinson,* 169
Glutathione, alloxan injection effect, *Leech and Bailey,* 525
Lactate distribution, *Johnson, Edwards, Dill, and Wilson,* 461
Physicochemical system, *Johnson, Edwards, Dill, and Wilson,* 461
Proteins, *Albanese,* 613
Pyruvic acid-lactic acid ratio, food, exercise, and anoxia, effect, *Friedemann, Haugen, and Kmieciak,* 673
Spectrophotometry *in vivo, Drabkin and Schmidt,* 69
Tryptophane, free, determination, microbiological, *Dunn, Schott, Frankl, and Rockland,* 387
Blood plasma: α-Amino acid nitrogen, *Woodruff and Man,* 93
Phospholipids, distribution, *Artom,* 595
Riboflavin, snakes, *Villela and Prado,* 693
Blood serum: Proteins, fractionation, normal and hypothyroid rats, *Moore, Levin, and Smelser,* 723
Brain: Lactic acid oxidation, *Galvão, Pereira, and Limongi,* 667
— — —, avitaminosis effect, *Galvão, Pereira, and Limongi,* 667
Butyric acid: Carbohydrate precursor, *Deuel, Johnston, Morehouse, Rollman, and Winzler,* 135
Carboxyl-labeled, liver, breakdown, *Medes, Weinhouse, and Floyd,* 35

C

Caffeine: Uric acid excretion, ingestion effect, *Buchanan, Christman, and Block,* 189
Calcium: Radioactive, vitamin D action, rickets, use in study, *Greenberg,* 99
Carbohydrate(s): Butyric acid, precursor, *Deuel, Johnston, Morehouse, Rollman, and Winzler,* 135
Metabolism, sulfhydryl enzymes, relation, *Barron and Singer,* 221
Carbon: Isotopic, acetoacetate oxidation, study with, *Buchanan, Sakami, Gurin, and Wilson,* 747
—, ketone body formation, kidney acetate relation, use in study, *Medes, Weinhouse, and Floyd,* 751
Carcinoma: Adrenocortical, digitonin-precipitable non-ketonic fraction, *Hirschmann and Hirschmann,* 601
—, steroid excretion, *Hirschmann and Hirschmann,* 601
Cardiolipin: Preparation, *Pangborn,* 691
Casein: -Silver, compound, *Lieben,* 627
Xanthurenic acid excretion, pyridoxine deficiency, effect, *Miller and Baumann,* 551
Chick: Biotin, various forms, effect, *Ott,* 131
Chloride: Excretion, altitude effect, *Burrill, Freeman, and Ivy,* 297
Cholesterol: Free, determination, Schoenheimer-Sperry method, *Sobel and Mayer,* 255
Pregnanediol conversion from, biological, *Bloch,* 661
Choline: Dimethylaminoethanol and, nutrition effect, comparison, *Jukes and Oleson,* 419
Milk products, determination, *Neurospora* use, *Hodson,* 383
Collagen: Deaminized, denaturation, *Theis,* 15
-Formaldehyde reaction, *Theis,* 15
-Quinone reaction, *Theis,* 23
— —, fixation and thermolability, hydrogen ion concentration effect, *Theis,* 23
Cozymase: Dihydro-, absorption spectrum, *Drabkin,* 563
—, transphosphorylation, rôle, *Colowick and Price,* 415
Creatine: Blood, determination, enzymatic, *Allinson,* 169

Creatinine: Blood, determination, enzymatic, *Allinson*, 169

D

Diet: Essential factors, guinea pig, *Woolley and Sprince*, 447
Dihydrocozymase: Absorption spectrum, *Drabkin*, 563
Transphosphorylation, rôle, *Colowick and Price*, 415
Dimethylaminoethanol: Nutrition effect, *Jukes and Oleson*, 419
Dinitrophenylhydrazone(s): 2,4-, estrone and equilenin, separation, chromatographic, *Veitch and Milone*, 417

E

Egg white: Lysozyme isolation, *Alderton, Ward, and Fevold*, 43
Einstein-Sutherland: Relationship, organic ions, diffusion, *Dean and Loring*, 717
Enzyme(s): Blood creatine and creatinine determination, use, *Allinson*, 169
Streptococcus lactis-stimulating factor, yeast, effect, *Laskowski, Mims, and Day*, 731
Sulfhydryl, carbohydrate metabolism, relation, *Barron and Singer*, 221
—, fat and protein metabolism, relation, *Singer and Barron*, 241
Transphosphorylation, rôle, *Colowick and Price*, 415
Urine uric acid, determination, use, *Buchanan, Block, and Christman*, 181
Vitamin B_c formation from conjugate, *Bird, Binkley, Bloom, Emmett, and Pfiffner*, 413
See also Arginase, Dihydrocozymase, Phospholipase, Trypsin
Equilenin: 2,4-Dinitrophenylhydrazone, separation, chromatographic, *Veitch and Malone*, 417
Estrogen(s): Feces, pregnancy, *Levin*, 407
Estrone: 2,4-Dinitrophenylhydrazone, separation, chromatographic, *Veitch and Milone*, 417
Ethanol: Dimethylamino-, nutrition effect, *Jukes and Oleson*, 419
Ethanolamine: Determination, *Artom*, 585
Phosphatidyl, tissue, determination, *Artom*, 585
Ethylene glycol: Biuret reaction, proteins, effect, *Mehl*, 173
Exercise: Blood pyruvic-lactic acid ratio, effect, *Friedemann, Haugen, and Kmieciak*, 673

F

Fat(s): Dietary, inositol lipotropic action, effect, *Beveridge and Lucas*, 311
Metabolism, sulfhydryl enzymes, relation, *Singer and Barron*, 241
Fatty acid(s): Free, tissue, *Fairbairn*, 645
Metabolism, *Medes, Weinhouse, and Floyd*, 35
Oxidation, liver, homogenized, adenosine polyphosphates, relation, *Lehninger*, 363
Tuberculin residue wax, *Ginger and Anderson*, 203
Feces: Estrogens, pregnancy, *Levin*, 407
Porphyrin, *Watson, Schwartz, and Hawkinson*, 345
Folic acid: Determination, titrimetric, *Teply and Elvehjem*, 303
Food(s): Blood pyruvic-lactic acid ratio, effect, *Friedemann, Haugen, and Kmieciak*, 673
Tryptophane determination, colorimetric, *Horn and Jones*, 153
Formaldehyde: -Collagen, reaction, *Theis*, 15
Protein-, reaction, *Theis*, 7, 15
—, —, temperature and denaturation effect, *Theis*, 7
Fructosan: Plant, determination, colorimetric, *McRary and Slattery*, 161

G

Glutamic acid: Determination, microbiological, *Lyman, Kuiken, Blotter, and Hale*, 395

Glutamic acid—*continued:*
l(+)-, determination, *Lactobacillus* use, *Lewis and Olcott*, 265
Glutamine: Urea synthesis from, liver extract relation, *Archibald*, 519
Glutathione: Blood, alloxan injection effect, *Leech and Bailey*, 525
Glyceraldehyde 3-phosphate: *d*-, oxidation and phosphorylation, spectrophotometry, *Drabkin and Meyerhof*, 571
Guinea pig: Diet essentials, *Woolley and Sprince*, 447

H

Harden-Young reaction: Alcoholic fermentation, origin, *Meyerhof*, 105
Hemoglobin: Isoleucine deficiency, *Albanese*, 613
Saturation, arterial blood, *in vivo*, spectrophotometry, *Drabkin and Schmidt*, 69
Hypothyroidism: Blood serum proteins, fractionation, effect, *Moore, Levin, and Smelser*, 723

I

Indoxyl: Precursors, *Stoppani*, 1
Inositol: Lipotropic action, fat, dietary, effect, *Beveridge and Lucas*, 311
Isoleucine: Hemoglobin, deficiency, *Albanese*, 613
Lactobacillus arabinosus requirements, specificity, *Hegsted*, 741
Isotope(s): Radioactive, mineral metabolism indicator, *Greenberg*, 99

K

Ketone bodies: Formation, kidney acetate relation, isotopic carbon in study, *Medes, Weinhouse, and Floyd*, 751
Ketosis: *Deuel, Johnston, Morehouse, Rollman, and Winzler*, 135
Kidney: Acetate, ketone body formation relation, isotopic carbon in study, *Medes, Weinhouse, and Floyd*, 751

L

Lactate: Blood, distribution, *Johnson, Edwards, Dill, and Wilson*, 461
Lactic acid: Brain, oxidation, avitaminosis effect, *Galvão, Pereira, and Limongi*, 667
-Pyruvic acid ratio, blood, food, exercise, and anoxia, effect, *Friedemann, Haugen, and Kmieciak*, 673
Lactobacillus: *l*(+)-Glutamic acid determination, use, *Lewis and Olcott*, 265
Lactobacillus arabinosus: Leucine, isoleucine, and valine requirements, *Hegsted*, 741
Lactobacillus casei: Factor, determination, titrimetric, *Teply and Elvehjem*, 303
—, vitamin M deficiency, monkey, effect, *Day, Mims, Totter, Stokstad, Hutchings, and Sloane*, 423
Leucine: Iso-, hemoglobin, deficiency, *Albanese*, 613
—, *Lactobacillus arabinosus* requirements, specificity, *Hegsted*, 741
Lactobacillus arabinosus requirements, specificity, *Hegsted*, 741
Lipase: Phospho-, moccasin venom, *Fairbairn*, 633
Lipid(s): Phospho-. *See* Phospholipid
Tubercle bacillus, chemistry, *Ginger and Anderson*, 203, 213
Liver: Butyric acid breakdown, carboxyl-labeled, *Medes, Weinhouse, and Floyd*, 35
Extract, urea synthesis from glutamine by, *Archibald*, 519
Homogenized, fatty acid oxidation, adenosine polyphosphates, relation, *Lehninger*, 363
Porphyrin, *Watson, Schwartz, and Hawkinson*, 345
Lysozyme: Egg white, isolation, *Alderton, Ward, and Fevold*, 43

M

Methylene blue: Decolorization, tissue extracts, nucleate effect, *Greenstein and Chalkley*, 753
Milk: Products, choline and biotin determination, *Neurospora* use, *Hodson*, 383

Mineral(s): Metabolism, radioactive isotopes in study, *Greenberg*, 99
Moccasin: Venom, phospholipase, *Fairbairn*, 633
Mold: *See also Neurospora*
Monkey: Vitamin M deficiency, *Lactobacillus casei* factor, effect, *Day, Mims, Totter, Stokstad, Hutchings, and Sloane*, 423
Muscle: *See also* Exercise
Mycocerosic acid: Tuberculin residues, *Ginger and Anderson*, 203

N

Neurospora: Biotin, milk products, determination, use, *Hodson*, 383
Choline, milk products, determination, use, *Hodson*, 383
Nicotinic acid: Deficiency, 3-acetylpyridine effect, *Woolley*, 455
Nitrogen: α-Amino acid, blood plasma, *Woodruff and Man*, 93
Nucleate(s): Methylene blue decolorization, tissue extracts, effect, *Greenstein and Chalkley*, 753

O

Organic ion(s): Diffusion, Einstein-Sutherland relationship, *Dean and Loring*, 717
Oxidation(s): Biological, *Barron and Singer*, 221
Singer and Barron, 241

P

Peptide(s): Amino acids and, *Dunn, Schott, Frankl, and Rockland*, 387
Proteins and, *Dunn, Schott, Frankl, and Rockland*, 387
Phosphatidyl ethanolamine: Tissue, determination, *Artom*, 585
Phosphatidyl serine: Tissue, determination, *Artom*, 585
Phospholipase: Moccasin venom, *Fairbairn*, 633
Phospholipid(s): Blood plasma, distribution, *Artom*, 595
Tissue, distribution, *Artom*, 595
Phthiocerol: Tubercle bacillus, *Ginger and Anderson*, 213
Plant(s): Fructosan, determination, colorimetric, *McRary and Slattery*, 161
Porphyrin(s): Bile, *Watson, Schwartz, and Hawkinson*, 345
Feces, *Watson, Schwartz, and Hawkinson*, 345
Liver, *Watson, Schwartz, and Hawkinson*, 345
Urine, *Watson, Schwartz, and Hawkinson*, 345
Uro-, *Grinstein, Schwartz, and Watson*, 323
Watson, Schwartz, and Hawkinson, 345
—, I, purification, *Grinstein, Schwartz, and Watson*, 323
—, Waldenström's, nature, *Grinstein, Schwartz, and Watson*, 323
Waldenström type, *Watson, Schwartz, and Hawkinson*, 345
Potassium: Excretion, altitude effect, *Burrill, Freeman, and Ivy*, 297
Urine, determination, gravimetric, *Freeman and Burrill*, 287
Pregnancy: Feces, estrogens, *Levin*, 407
Pregnanediol: Cholesterol conversion to, biological, *Bloch*, 661
Protein(s): Amino acids and, *Dunn, Schott, Frankl, and Rockland*, 387
Biuret reaction, ethylene glycol presence, *Mehl*, 173
Blood, *Albanese*, 613
— serum, fractionation, normal and hypothyroid rats, *Moore, Levin, and Smelser*, 723
-Formaldehyde reaction, *Theis*, 7, 15
— —, temperature and denaturation effect, *Theis*, 7
Metabolism, sulfhydryl enzymes, effect, *Singer and Barron*, 241
Peptides and, *Dunn, Schott, Frankl, and Rockland*, 387
Trypsin effect, *Haurowitz, Tunca, Schwerin, and Göksu*, 621
Tryptophane determination, colorimetric, *Horn and Jones*, 153
l(−)-Tryptophane, determination, microbiological, *Wooley and Sebrell*, 141

Pseudomonas saccharophila: Raffinose utilization, *Doudoroff*, 699
Purine(s): Methylated, metabolism, *Buchanan, Block, and Christman*, 181
Buchanan, Christman, and Block, 189
Pyridine: 3-Acetyl-, nicotinic acid deficiency relation, *Woolley*, 455
Pyridoxal: Natural products, *Snell*, 491
Vitamin activity, various organisms, *Snell and Rannefeld*, 475
Pyridoxamine: Natural products, *Snell*, 491
Vitamin activity, various organisms, *Snell and Rannefeld*, 475
Pyridoxine: Deficiency, xanthurenic acid excretion, casein and tryptophane effect, *Miller and Baumann*, 551
Pyruvic acid: *Friedemann, Haugen, and Kmieciak*, 673
Lactic acid-, ratio, blood, food, exercise, and anoxia, effect, *Friedemann, Haugen, and Kmieciak*, 673

Q

Quinone: Collagen-, reaction, *Theis*, 23
—, —, fixation and thermolability, hydrogen ion concentration effect, *Theis*, 23

R

Raffinose: *Pseudomonas saccharophila*, utilization, *Doudoroff*, 699
Riboflavin: Blood plasma, snakes, *Villela and Prado*, 693
Metabolism, thiamine deficiency effect, *Sure*, 543
Rickets: Vitamin D action, radioactive calcium and strontium in study, *Greenberg*, 99

S

Serine: Determination, *Artom*, 585
—, microbiological, *Stokes and Gunness*, 651
Phosphatidyl, tissue, determination, *Artom*, 585
Silver: -Casein compound, *Lieben*, 627
Snake(s): Brazilian, blood plasma riboflavin, *Villela and Prado*, 693
See also Moccasin
Sodium: Excretion, altitude effect, *Burrill, Freeman, and Ivy*, 297
Spectrophotometry: *Drabkin and Schmidt*, 69
Drabkin, 563
Steroid(s): Excretion, adrenocortical carcinoma, *Hirschmann and Hirschmann*, 601
Streptococcus lactis: -Stimulating factor, yeast, enzymatic production, *Laskowski, Mims, and Day*, 731
Strontium: Radioactive, vitamin D action, rickets, use in study, *Greenberg*, 99
Sulfhydryl: Enzymes, carbohydrate metabolism, relation, *Barron and Singer*, 221
—, fat metabolism, relation, *Singer and Barron*, 241
—, protein metabolism, relation, *Singer and Barron*, 241

T

Theobromine: Uric acid excretion, ingestion effect, *Buchanan, Christman, and Block*, 189
Theophylline: Uric acid excretion, ingestion effect, *Buchanan, Christman, and Block*, 189
Thiamine: Deficiency, riboflavin metabolism, effect, *Sure*, 543
Thyroid: *See also* Hypothyroidism
Tissue: Phospholipids, distribution, *Artom*, 595
Transamination: Bacteria, *Lichstein and Cohen*, 85
Vitamin B_6 and, *Schlenk and Snell*, 425
Transphosphorylation: Dihydrocozymase rôle, *Colowick and Price*, 415
Trypsin: Protein, effect, *Haurowitz, Tunca, Schwerin, and Göksu*, 621
Tryptophane: Foods, determination, colorimetric, *Horn and Jones*, 153
Free, blood, determination, microbiological, *Dunn, Schott, Frankl, and Rockland*, 387

Tryptophane—*continued:*
l(−)-, protein, determination, microbiological, *Wooley and Sebrell*, 141
Proteins, determination, colorimetric, *Horn and Jones*, 153
Urine, determination, *Albanese and Frankston*, 59
Xanthurenic acid excretion, pyridoxine deficiency, effect, *Miller and Baumann*, 551
Tubercle bacillus: Lipids, chemistry, *Ginger and Anderson*, 203, 213
Phthiocerol, *Ginger and Anderson*, 213
Tuberculin: Residues, mycocerosic acid, *Ginger and Anderson*, 203
—, wax, fatty acids, *Ginger and Anderson*, 203

U

Urea: Determination, colorimetric, *Archibald*, 507
Synthesis from glutamine, liver extract relation, *Archibald*, 519
Uric acid: Excretion, caffeine, theophylline, and theobromine ingestion, effect, *Buchanan, Christman, and Block*, 189
Urine, determination, enzymatic, *Buchanan, Block, and Christman*, 181
Urine: Porphyrin, *Watson, Schwartz, and Hawkinson*, 345
Potassium, determination, gravimetric, *Freeman and Burrill*, 287
Tryptophane determination, *Albanese and Frankston*, 59
Uric acid determination, enzymatic, *Buchanan, Block, and Christman*, 181
Uroporphyrin(s): *Grinstein, Schwartz, and Watson*, 323
Watson, Schwartz, and Hawkinson, 345
Uroporphyrin(s)—*continued:*
I, purification, *Grinstein, Schwartz, and Watson*, 323
Waldenström's, nature, *Grinstein, Schwartz, and Watson*, 323

V

Valine: *Lactobacillus arabinosus* requirements, specificity, *Hegsted*, 741
Venom: Moccasin, phospholipase, *Fairbairn*, 633
Vitamin(s): B_c, enzymatic formation from conjugate, *Bird, Binkley, Bloom, Emmett, and Pfiffner*, 413
B_c, *Snell and Rannefeld*, 475
Snell, 491
—, transamination and, *Schlenk and Snell*, 425
D, rickets, action, radioactive calcium and strontium in study, *Greenberg*, 99
Interrelationships, *Sure*, 543
M deficiency, monkey, *Lactobacillus casei* factor effect, *Day, Mims, Totter, Stokstad, Hutchings, and Sloane*, 423
Pyridoxal activity, various organisms, *Snell and Rannefeld*, 475
Pyridoxamine activity, various organisms, *Snell and Rannefeld*, 475
See also Avitaminosis

W

Wax: Tuberculin residues, fatty acids, *Ginger and Anderson*, 203

X

Xanthurenic acid: Excretion, pyridoxine deficiency, casein and tryptophane effect, *Miller and Baumann*, 551

Y

Yeast: *Streptococcus lactis*-stimulating factor, enzymatic production, *Laskowski, Mims, and Day*, 731